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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/740,552	09/19/2001	Kouichi Taniguchi	09792909-4727	4498

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EXAMINER

NGO, HUYEN LE

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 12/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/740,552

Applicant(s)

TANIGUCHI, KOUICHI

Examiner

Julie-Huyen L. Ngo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 15 October 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The amendment filed on October 15, 2002 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material that is not supported by the original disclosure is as follows:

In the last line of claim 1, "another structure of the liquid crystal display."

In claim 6, "thereafter sealing a cavity with said pattern."

In claim 9, "other structures of the pixel elements."

In claim 10, the further step of forming "at least one other structure of the display" in the step of forming the sealing film.

In claim 11, the further step of forming "at least one other structure of pixel element" in the step of forming the sealing film.

Applicant is to note that the original disclosure only described that the seal pattern is formed simultaneously with the step of forming pixels or pixel patterns (see pages 5, 8 and 10 of the specification).

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Objections

In the last line of claim 6, the step of "sealing a cavity with said pattern" is incomplete and unclear of how the "cavity" is sealed/formed. It appears that the sealing pattern forms the cavity on a surface of the substrate.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 6, 8, 10 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In line 3 of claim 6, "said seal pattern" lacks antecedence.

In claim 8, "said seal patterns" lack antecedence since there is only one "seal pattern" recited earlier in claims 7, 2 and 1, which claim 8 is depended from.

Claims not specifically mentioned above are rejected as bearing the defect(s) of the claim(s) from which they depend.

Response to Arguments

Applicant's arguments filed on October 15, 2002 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the amended features in claim s 1, 6, 9, 10 and 11) are not recited in the rejected claims. However, these features are not supported by the specification as originally filed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 4-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Ito et al. (JP411174487A).

With respect to claim 1, Ito et al. teach (Fig. 1 and 2) a liquid crystal display (LCD) comprising:

- a drive substrate 12 having active devices 15 mounted thereon for a driving liquid crystal;
- an opposite substrate 11 having electrodes provided thereon opposed to said active devices;
- a seal pattern 37 shown in Fig. 2 for joining both substrates with a substantially uniformly spaced gap there between;
- a liquid crystal filled in the gap,

Wherein

- said seal pattern 37 is provided on at least one of said drive substrate and
- said opposite substrate during a film-forming step, which is also used for forming another structure (seal pattern and spacer pattern) of the liquid crystal display.

With respect to claim 6, Ito et al. teach (Fig. 1 and 2) a method of forming a display device comprising the steps of:

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- forming over at least a portion of a semiconductor substrate a seal film 31 for forming said seal pattern 37;
- covering said seal film with a mask 32;
- submitting said seal film to light exposure through said mask;
- developing the exposed seal film; and thereafter forming/sealing a cavity with the seal pattern.
-

With respect to claim 9, Ito et al. teach (Fig. 1 and 2) a method for fabricating a liquid crystal display, comprising the steps of:

- forming on a drive substrate active devices for driving liquid crystal;
- forming on an opposite substrate electrodes opposed to said active devices;
- forming a seal pattern on at least either one of said drive substrate and said opposite substrate;
- joining both substrates with a gap therebetween; and
- filling liquid crystal into said gap, wherein said seal pattern is formed in a film forming step that is also used in the formation of other structures of the pixel elements (spacer parts 34, 36).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-5, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Ito et al. (JP1 1 174487A) as applied to claim 1 above.

With respect to claims 2 and 3, it is well-known in the art for a liquid crystal display having a seal pattern that joins both substrates through being fused on a surface thereof by heating; or having a seal pattern that joins both substrates through being pressed together for adhering the seal pattern to substrates.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the seal pattern in Ito et al's liquid crystal display joins both substrates through being fused on a surface thereof by heating; or having said seal pattern joins both substrates through being pressed together for adhering the seal pattern to substrates (claim 3).

With respect to claim 4, although the drawings do not clearly indicate that said seal pattern 37 is provided over said drive substrate on a planarization film, which covers the active devices, one of ordinary skill in the art would have known that a seal pattern is formed over said drive substrate on said planarization film in order for the substrates 11 and 12 to be sealed together.

With respect to claim 5, although the drawings do not clearly indicate that said seal pattern 37 is provided on said opposite substrate 11 (fig. 2g), and is formed on a transparent electrode film, one of ordinary skill in the art would have known that a seal

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pattern is formed over said opposite substrate and is formed on said transparent electrode film in order for the substrates 11 and 12 to be sealed together.

With respect to claims 7 and 8, each of said seal patterns is corrugated on the surface thereof so as to be engaged with each other to thereby allow both substrates to be joined.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Contact Information

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Julie-Huyen L. Ngo whose telephone number is (703) 305-3508. The Examiner can normally be reached on T-Friday.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Mr. Robert H. Kim can be reached at (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-4709 for regular communications and (703) 746-4709 for After Final communications. Please contact the Examiner before faxing any paper to the Office.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

December 19, 2002



Julie-Huyen L. Ngo
Patent Examiner
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